

REMARKS

Claim 5 has been canceled. Claims 1 and 6-7 have been amended. Claims 16 and 17 have been newly added. Basis for this new claims can be found on page 6, lines 3-10. Thus, claims 1-4 and 6-17 are presently in the application.

In regard to claim 1, the variable "R^d" was included in the definition of "R", but the definition of R^d, itself, was inadvertently omitted. However, support for amending claim 1 to include a definition of R^d can be found in the definition of "R^c" in claim 1 as originally filed. Inasmuch as R^c and R^e may form a six-membered aromatic ring, R^d, thus, must at least be hydrogen. As such, R^d in claim 1 and the specification at page 4 has been amended to recite hydrogen.

In regard to claims 6-7, these claims have been amended to include a pharmaceutically acceptable salt or solvate thereof, a buffer, a diluent or a excipient in the formulation. Basis for the amendments can be found in claim 1 and on page 24, lines 18-25, to page 25, lines 1-4. Additionally, claims 6-7 have been amended to correct the antecedent basis ("a" has been replaced by "said"). Furthermore, claim 7 has been amended to correct an obvious typographical error ("an antifungal" infection has been replaced by "a fungal" infection). Basis for this amendment can be found on page 26, lines 5-23.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

For the Examiner's convenience, a clean claim set is attached.

Early and favorable action on the merits is respectfully requested.

Please charge any fees or credit any overpayment in connection with this application which may be required by this or any related paper to Deposit Account No. 05-0840.

If the Examiner has any questions, or would like to discuss any matters in connection with this application, he or she is invited to contact the undersigned at (317) 277-3537.

Respectfully submitted,

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Attachments: Clean Claim Set

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification

On page 4 of the specification, after the sentence, “R^c is hydrogen, hydroxy, C₁-C₄ alkoxy...;” please insert the following

--R^d is hydrogen;--

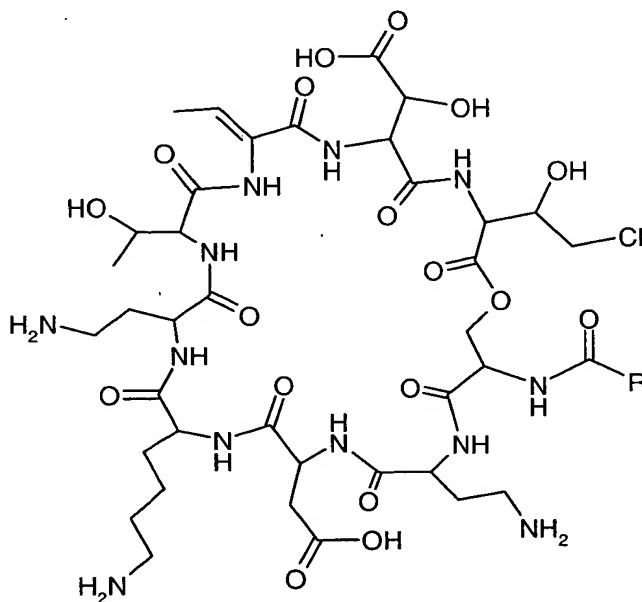
On page 6 of the specification, line 8, please replace “an antifungal” with “a fungal”.

In the claims:

Claim 5 has been cancelled.

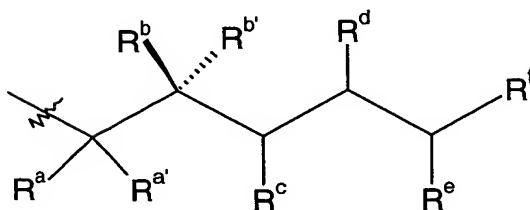
The claims have been amended as follows:

1. (Amended) A compound represented by structure I



I

wherein R is



where

R^a and $R^{a'}$ are independently hydrogen or methyl, or either R^a or $R^{a'}$ is alkyl amino, taken together with R^b or $R^{b'}$ forms a six-membered cycloalkyl ring, a six-membered aromatic ring or a double bond, or taken together with R^c forms a six-membered aromatic ring;

R^b and $R^{b'}$ are independently hydrogen, halogen, or methyl, or either R^b or $R^{b'}$ is amino, alkylamino, α -acetoacetate, methoxy, or hydroxy provided that $R^{b'}$ is not hydroxy when R^a , R^b , R^d , R^e are hydrogen, R^c is hydrogen and R^f is *n*-hexyl, *n*-octyl or *n*-decyl, or R^a , R^b , R^d , R^e are hydrogen, R^c is hydroxy and R^f is *n*-octyl, *n*-nonyl, or *n*-decyl;

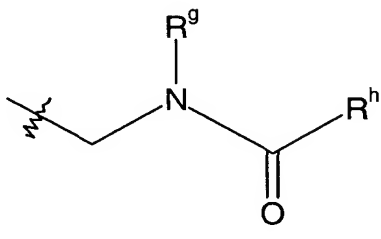
R^c is hydrogen, hydroxy, C_1 - C_4 alkoxy, hydroxyalkoxy, or taken together with R^e forms a 6-membered aromatic ring or C_5 - C_6 cycloalkyl ring;

R^d is hydrogen;

R^e is hydrogen, or taken together with R^f is a six-membered aromatic ring, C_5 - C_{14} alkoxy substituted six-membered aromatic ring, or C_5 - C_{14} alkyl substituted six-membered aromatic ring, and

R^f is C_8 - C_{18} alkyl, C_5 - C_{11} alkoxy, or biphenyl; or

R is

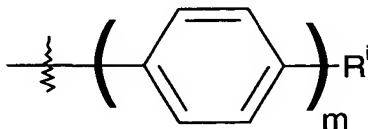


where

R^g is hydrogen, or C_1 - C_{13} alkyl, and

R^h is C_1 - C_{15} alkyl, C_4 - C_{15} alkoxy, (C_1 - C_{10} alkyl)phenyl, $-(CH_2)_n$ -aryl, or $-(CH_2)_n$ -(C_5 - C_6 cycloalkyl), where $n = 1-2$; or

R is

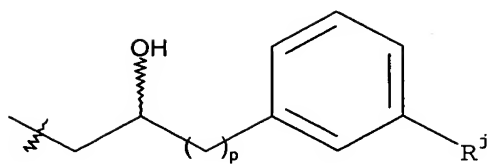


where

R^i is a hydrogen, halogen, or C_5 - C_8 alkoxy, and

m is 1, 2 or 3;

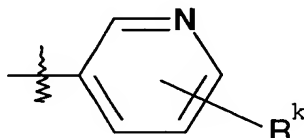
R is



where

R^j is C₅-C₁₄ alkoxy or C₅-C₁₄ alkyl, and p = 0, 1 or 2;

R is



where

R^k is C₅-C₁₄ alkoxy; or

R is -(CH₂)-NR^m-(C₁₃-C₁₈ alkyl), where R^m is H, -CH₃ or

-C(O)CH₃; and

pharmaceutically acceptable salts and solvates thereof.

6. (Amended) A pharmaceutical formulation comprising [a] said pseudomycin compound or said pharmaceutically acceptable salt or solvate thereof of Claim 2 and a pharmaceutically acceptable carrier, diluent, buffer, or excipient.

7. (Amended) A method for treating [an antifungal] a fungal infection in an animal in need thereof, comprising the steps of administering to said animal [a] said pseudomycin compound [of Claim 2] or said pharmaceutically acceptable salt or solvate thereof of Claim 2.

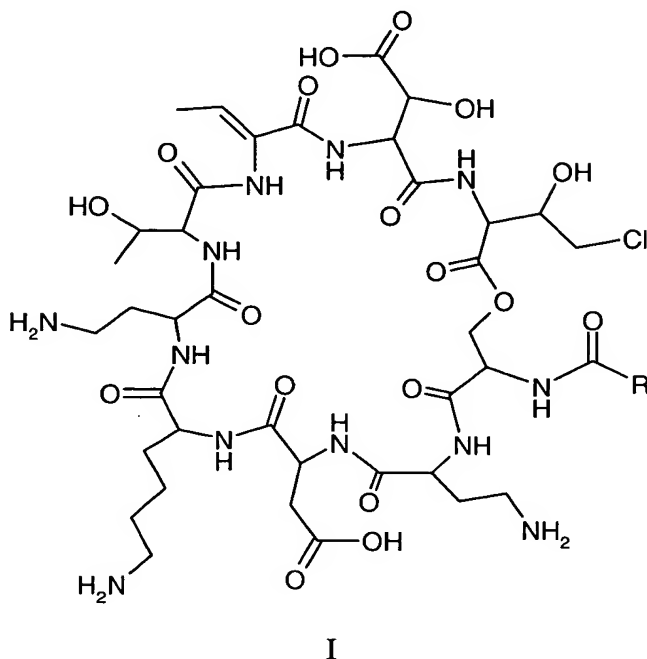
Claims 16 and 17 have been added as follows:

--16. A pharmaceutical formulation comprising said pseudomycin compound or said pharmaceutically acceptable salt or solvate thereof of Claim 1 and a pharmaceutically acceptable carrier, diluent, buffer, or excipient.--

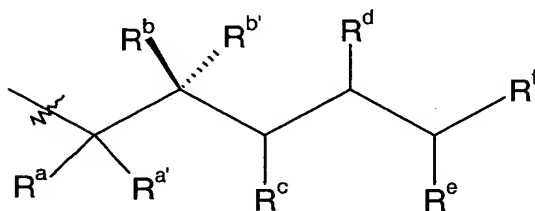
--17. A method for treating a fungal infection in an animal in need thereof, comprising the steps of administering to said animal said pseudomycin compound or said pharmaceutically acceptable salt or solvate thereof of Claim 1.--

CLEAN CLAIM SET

1. A compound represented by structure I



wherein R is



where

R^a and $R^{a'}$ are independently hydrogen or methyl, or either R^a or $R^{a'}$ is alkyl amino, taken together with R^b or $R^{b'}$ forms a six-membered cycloalkyl ring, a six-membered aromatic ring or a double bond, or taken together with R^c forms a six-membered aromatic ring;

R^b and $R^{b'}$ are independently hydrogen, halogen, or methyl, or either R^b or $R^{b'}$ is amino, alkylamino, α -acetoacetate, methoxy, or hydroxy provided that $R^{b'}$ is not hydroxy when R^a , R^b , R^d , R^e are hydrogen, R^c is hydrogen and R^f is *n*-hexyl, *n*-octyl or *n*-decyl, or R^a , R^b , R^d , R^e are hydrogen, R^c is hydroxy and R^f is *n*-octyl, *n*-nonyl, or *n*-decyl;

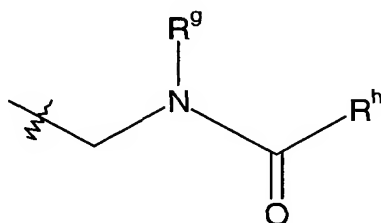
R^c is hydrogen, hydroxy, C_1 - C_4 alkoxy, hydroxyalkoxy, or taken together with R^e forms a 6-membered aromatic ring or C_5 - C_6 cycloalkyl ring;

R^d is hydrogen;

R^e is hydrogen, or taken together with R^f is a six-membered aromatic ring, C_5 - C_{14} alkoxy substituted six-membered aromatic ring, or C_5 - C_{14} alkyl substituted six-membered aromatic ring, and

R^f is C_8 - C_{18} alkyl, C_5 - C_{11} alkoxy, or biphenyl; or

R is

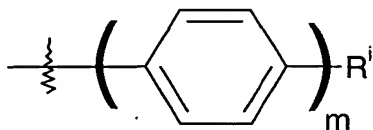


where

R^g is hydrogen, or C_1 - C_{13} alkyl, and

R^h is C_1 - C_{15} alkyl, C_4 - C_{15} alkoxy, $(C_1$ - C_{10} alkyl)phenyl, $-(CH_2)_n$ -aryl, or $-(CH_2)_n$ -(C_5 - C_6 cycloalkyl), where $n = 1-2$; or

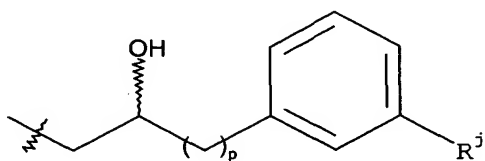
R is



where

R^i is a hydrogen, halogen, or C_5 - C_8 alkoxy, and
m is 1, 2 or 3;

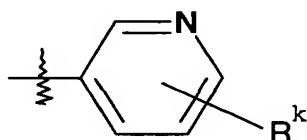
R is



where

R^j is C_5 - C_{14} alkoxy or C_5 - C_{14} alkyl, and $p = 0, 1$ or 2 ;

R is



where

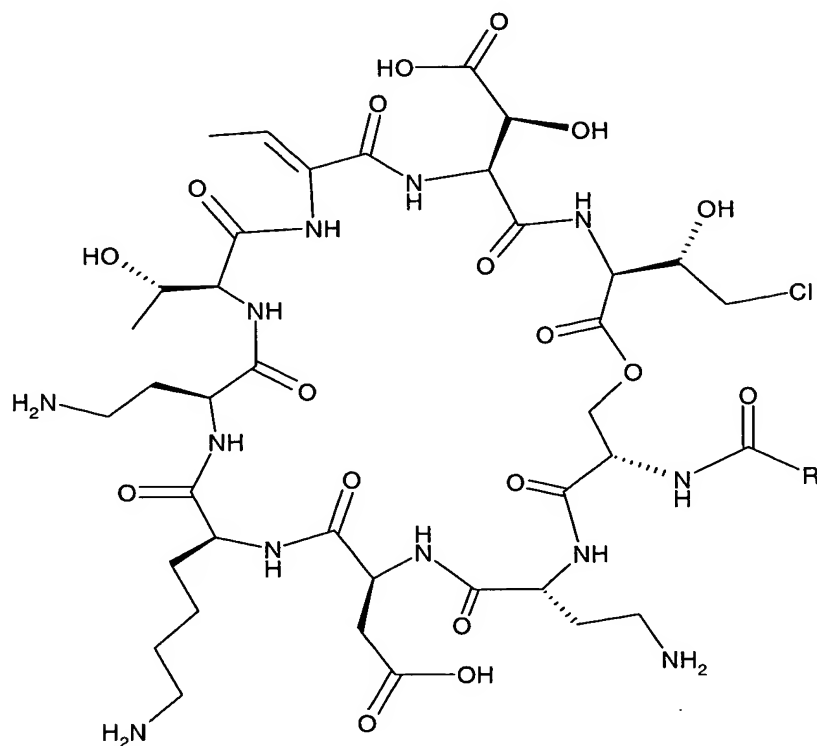
R^k is C_5 - C_{14} alkoxy; or

R is $-(CH_2)-NR^m-(C_{13}-C_{18} \text{ alkyl})$, where R^m is H, $-CH_3$ or

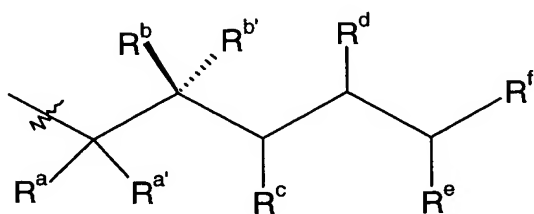
$-C(O)CH_3$; and

pharmaceutically acceptable salts and solvates thereof.

2. The compound of Claim 1 wherein structure I has the following stereochemistry



3. The compound of Claim 1 wherein R is



where

R^a and $R^{a'}$ are independently hydrogen or methyl, or either R^a or $R^{a'}$ is alkyl amino, taken together with R^b or $R^{b'}$ forms a six-membered cycloalkyl ring, a six-

membered aromatic ring or a double bond, or taken together with R^c forms a six-membered aromatic ring;

R^b and R^{b'} are independently hydrogen, halogen, or methyl, or either R^b or R^{b'} is amino, alkylamino, α -acetoacetate, methoxy, or hydroxy provided that R^{b'} is not hydroxy when R^a, R^b, R^d, R^e are hydrogen, R^c is hydrogen and R^f is *n*-hexyl, *n*-octyl or *n*-decyl, or R^a, R^b, R^d, R^e are hydrogen, R^c is hydroxy and R^f is *n*-octyl, *n*-nonyl, or *n*-decyl;

R^c is hydrogen, hydroxy, C₁-C₄ alkoxy, hydroxyalkoxy, or taken together with R^c forms a 6-membered aromatic ring or C₅-C₆ cycloalkyl ring;

R^c is hydrogen, or taken together with R^f is a six-membered aromatic ring, C₅-C₁₄ alkoxy substituted six-membered aromatic ring, or C₅-C₁₄ alkyl substituted six-membered aromatic ring, and

R^f is C₈-C₁₈ alkyl, C₅-C₁₁ alkoxy, or biphenyl.

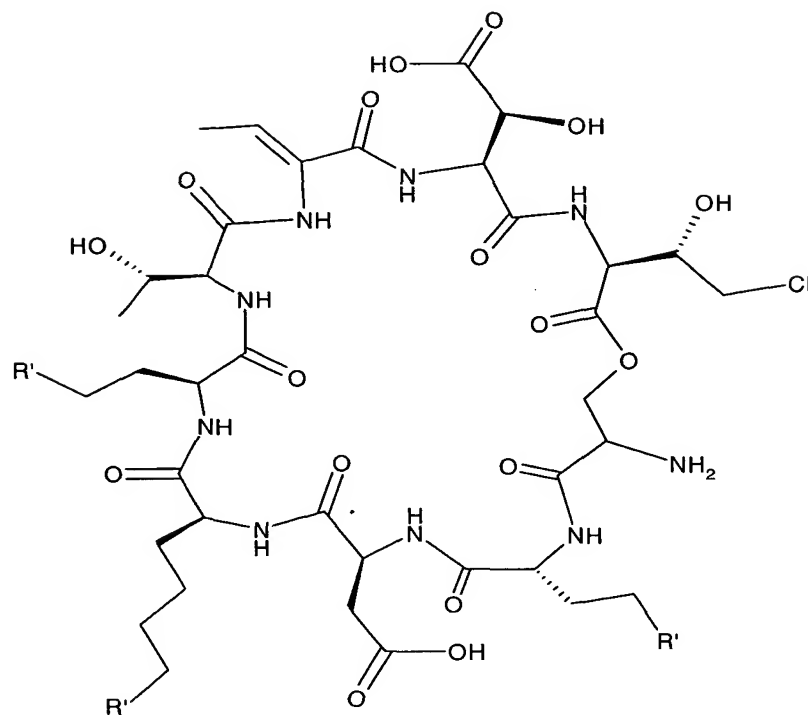
4. The compound of Claim 3 wherein R^{b'} is hydroxy provided that R^c is not hydrogen when R^a, R^b, R^d, R^e are hydrogen and R^f is *n*-hexyl, *n*-octyl or *n*-decyl, or R^c is not hydroxy when R^f is *n*-octyl, *n*-nonyl, or *n*-decyl.

6. A pharmaceutical formulation comprising said pseudomycin compound or said pharmaceutically acceptable salt or solvate thereof of Claim 2 and a pharmaceutically acceptable carrier, diluent, buffer, or excipient.

7. A method for treating a fungal infection in an animal in need thereof, comprising the steps of administering to said animal said pseudomycin compound or said pharmaceutically acceptable salt or solvate thereof of Claim 2.

8. A process for producing a pseudomycin nucleus comprising the steps of providing a pseudomycin compound having an N-acyl alkyl side-chain containing at least one gamma or delta hydroxy group and reacting said pseudomycin compound with an acid to produce said pseudomycin nucleus.

9. The process of Claim 8 wherein said pseudomycin nucleus is represented by structure I-A



I-A

wherein R' is -NH₂ or -NHp-Pg where Pg is an amino protecting group and p is 0 or 1.

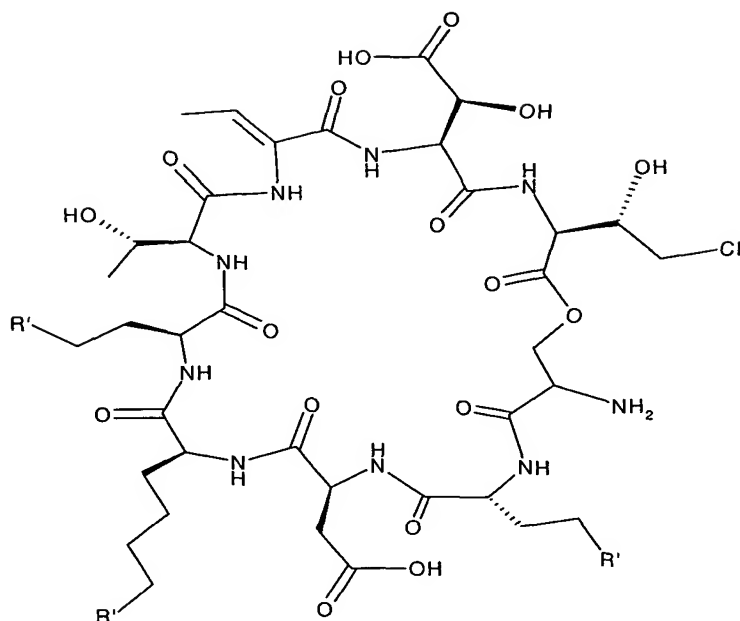
10. The process of Claim 8 wherein said pseudomycin compound having an N-acyl alkyl side-chain containing at least one gamma or delta hydroxy group is selected from the group consisting of pseudomycin A, pseudomycin A' and pseudomycin C.

11. The process of Claim 8 wherein said acid is trifluoroacetic acid or acetic acid.

12. The process of Claim 11 wherein said acid is trifluoroacetic acid.

13. A pseudomycin nucleus prepared by the process of Claim 8.

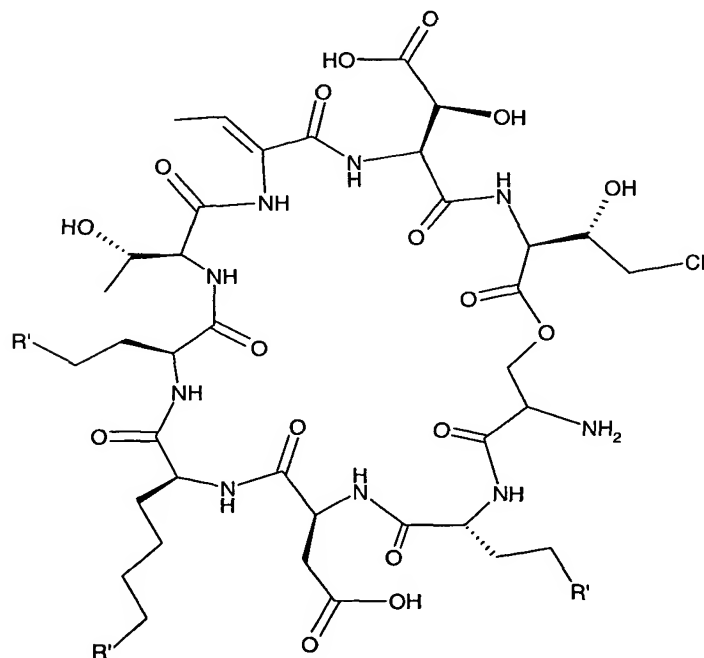
14. The pseudomycin nucleus of Claim 13 wherein said nucleus is represented by structure I-A



I-A

wherein R' is -NH₂ or -NHp-Pg where Pg is an amino protecting group and p is 0 or 1.

15. A pseudomycin nucleus represented by structure I-A



I-A

wherein R' is -NH₂ or -NHp-Pg where Pg is an amino protecting group and p is 0 or 1.

17. A method for treating a fungal infection in an animal in need thereof, comprising the steps of administering to said animal said pseudomycin compound or said pharmaceutically acceptable salt or solvate thereof of Claim 1.